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## A RESULT OF DROSOPHILID SURVEY IN TANZANIA

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**ABSTRACT** Thirteen species of Drosophilidae were collected at the Mahale Mountains National Park, western Tanzania, in August to November, 1986. These species belong to two genera, *Zaprionus* and *Drosophila*. Ten of the 13 species are new records from Tanzania.

**Key Words:** Drosophilid fly; Mahale Mountains National Park; Drosophilidae; *Zaprionus*; *Drosophila*.

### INTRODUCTION

The records of Drosophilidae from Tanzania have been rather poor: 10 species of *Leucophenga* by Bächli (1971); 2 unnamed species of *Drosophila* by Tsacas, Lachaise & David (1981) and 6 species of *Drosophila* and 2 species of *Zaprionus* by Takada & Uehara (1987), so far as known.

The present material involves about 280 specimens, classified into 13 species, of which 10 are newly found from Tanzania. Collection was made by one of the authors (K. K.) in the Mahale Mountains National Park, Kansyana, Kigoma District, Kigoma Region in August to November, 1986, by means of banana and lemon traps, sometimes soaked in wine. A lot of female specimens especially of the *melanogaster* species subgroup remain non-identified to species.

### RESULTS

The following 13 species (including one unclassified taxon) were identified among the specimens. The data are summarized in Table 1.

#### Genus *Zaprionus* Coquillett

##### 1. *Zaprionus tuberculatus* Malloch

*Zaprionus tuberculatus* Malloch, 1932. *Stylops* 1: 11.

Specimens examined: 25 males, 28 females, 24. VIII. 8:20-14:00 (lemon): 2 males, 30. X. 10:59-11:25 (banana wine): 1 male, 1 female, 1. X. 15:36-16:10 (banana, lemon).

This species is widely distributed in Afrotropical Region.

##### 2. *Zaprionus indianus* Gupta

*Zaprionus indianus* Gupta, 1970. *Proc. Ind. Nat. Sci. Acad.* 36: 63 (India).

Table 1. Collection data of Drosophilidae in the Mahale Mountains National Park, Tanzania, 1986.\*

	Date Time Bait	24.VIII Lemon	24.VIII Lemon	26.X 14:57 Lemon	26.X 17:23 Lemon	30.X 10:59 Banana & Wine M/F	30.X 11:25 Banana & Wine M/F	30.X 11:40 Lemon & Wine M/F	1.XI 15:36 Lemon M/F	1.XI 16:10 Banana M/F	Total M/F
Genus <i>Zaprionus</i>	Sex	M/F	M/F	M/F	M/F	M/F	M/F	M/F	M/F	M/F	
1. <i>Z. tuberculatus</i> Malloch		23/18	2/10	0/0	0/0	1/0	1/0	0/0	1/0	0/1	28/29
2. <i>Z. indianus</i> Gupta		1/0	0/0	0/0	0/0	11/6	2/1	3/1	0/3	1/0	18/11
3. <i>Z. ghesquierei</i> Collart		1/0	0/0	0/0	0/0	0/3	0/2	2/2	1/0	6/2	10/9
Genus <i>Drosophila</i>											
Subgenus <i>Sophophora</i>											
<i>melanogaster</i> sp. group											
<i>melanogaster</i> sp. subgroup											
4. <i>D. melanogaster</i> Meigen		0/0	14/0	0/0	0/0	3/0	0/0	0/0	0/0	14/0	31/0
5. <i>D. teissieri</i> Tsacas		0/0	0/0	0/0	0/0	1/0	1/0	1/0	2/0	2/0	7/0
6. <i>D. yakuba</i> Burla		0/0	0/0	0/0	0/0	16/0	3/0	2/0	1/0	11/0	33/0
<i>montium</i> sp. subgroup											
7. <i>D. vulcana</i> Graber		0/0	0/0	0/0	0/0	0/0	1/0	0/0	0/0	1/0	2/0
8. <i>D. tsacasi</i> Bock et Wheeler		0/0	0/0	0/0	0/0	1/0	0/0	0/0	0/0	1/0	2/0
9. <i>D. sp. A</i> of Peterson et Tsacas		0/0	0/0	0/0	0/0	6/0	0/0	0/0	0/0	0/0	6/0
<i>D. spp.</i> (Female)		0/4	0/9	0/7	0/2	0/22	0/14	0/8	0/11	0/11	0/88
<i>fina</i> sp. group											
10. <i>D. fina</i> Burla		0/0	0/0	0/0	0/0	1/0	1/0	0/0	0/0	0/0	2/0
Subgenus <i>Scaptodrosophila</i>											
11. <i>D. sp.</i>		0/0	0/0	0/0	0/0	1/0	1/0	0/0	0/0	0/0	2/0
Subgenus <i>Drosophila</i>											
12. <i>D. nasuta</i> Lamb		0/0	0/0	0/0	0/0	1/0	1/0	0/0	0/0	0/0	2/0
13. <i>D. hydei</i> Sturtevant		0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/1	0/1
Total		25/22	16/19	0/7	0/2	42/31	11/17	8/11	5/14	36/15	143/138

\*Number in each cell indicates the number of specimens of each sex examined.

*Zaprionus collarti* Tsacas. 1960. p. 684. in *Catalogue of Diptera of the Afrotropical Region.*, R. W. Crosskey ed., Brit. Mus.

Specimens examined: 1 male, 24. VIII, 8:20 (lemon); 13 males, 7 females, 30. X, 10:59–11:25 (banana wine); 1 male, 3 females, 1. XI, 15:36–16:10 (banana, lemon).

This species is widely distributed in India and Afrotropical Region, characterized by having 'collarete' of aedeagus basally narrowing (cf. Tsacas, 1980). It was recorded by Takada and Uehara (1987) from Tanzania.

3. *Zaprionus ghesquierei* Collart

*Zaprionus ghesquierei* Collart, 1937. *Bull. r. d'Hist. nat. Belg.* 13(9): 8.

Specimens examined: 1 male, 24. VIII, 8:20 (lemon); 2 males, 7 females, 30. X, 10:59–11:40 (banana wine, lemon wine); 7 males, 2 females, 1. XI, 15:36–16:10 (banana, lemon).

This species is widely distributed in central Africa.

Genus *Drosophila* Fallén

Subgenus *Sophophora* Sturtevant

*melanogaster* species group Sturtevant

*melanogaster* species subgroup Hsu

4. *Drosophila melanogaster* Meigen

*Drosophila melanogaster* Meigen. 1830. *Syst. Besch. bek. eur. zweifl. Ins.* 6: 85.

Specimens examined: 14 males, 24. VIII, 14:00 (lemon); 3 males, 30. X, 10:59 (banana wine); 14 males, 1. XI, 16:10 (banana).

5. *Drosophila teissieri* Tsacas

*Drosophila teissieri* Tsacas. 1971. *Bull. Soc. ent. Fr.* 76: 35.

Specimens examined: 3 males, 30. X, 10:59–11:40 (banana wine, lemon wine); 4 males, 1. XI, 15:36–16:10 (banana, lemon).

This species is common in central and west Africa.

6. *Drosophila yakuba* Burla

*Drosophila yakuba* Burla. 1954b. *Rev. Suis. Zool.* 55: 161.

Specimens examined: 21 males, 30. X, 10:59–11:40 (banana wine, lemon wine); 12 males, 1. XI, 15:36–16:10 (banana, lemon).

This species is common throughout Afrotropical Region.

*montium* species subgroup Hsu

7. *Drosophila vulcana* Graber

*Drosophila vulcana* Graber, 1957. *Zool. Jahrb. Abt. Syst.* 85: 309 (Uganda); Bock et Wheeler, 1972. *Univ. Texas Publ.* 7213: 81.

Specimens examined: 1 male, 30. X, 11:25 (banana wine); 1 male, 1. XI, 16:10 (banana).

This species is widely spread in southern Africa.

8. *Drosophila tsacasi* Bock et Wheeler

*Drosophila tsacasi* Bock et Wheeler, 1972. *Univ. Texas Publ.* 7213: 79 (Ivory Coast).

*Drosophila seguyi* of Burla, 1954a (part., figs. 3, 5) (Ivory Coast) (not Smart. 1945).

Specimens examined: 1 male, 30. X, 11:25 (banana wine); 1 male, 1. X, 16:10 (banana).

This species is distinguished from *D. seguyi* Smart (sp. B of Paterson et Tsacas, 1967) by having metatarsal sex combs in a straight line (last 2 teeth are displaced in *seguyi*) and median process of hypandrium longer. It is recorded by Takada and Uehara (1987) from Tanzania.

9. *Drosophila* sp. A of Paterson et Tsacas.

*Drosophila* sp. A, Paterson et Tsacas, 1967. *Dros. Inf. Serv.* 42: 73; Bock et Wheeler, 1972. *Univ. Texas Publ.* 7213: 81 (Ivory Coast).

*Drosophila seguyi* of Burla, 1954b, *Rev. Suis. Zool.* 61: 157 (part, fig. 162) (Ivory Coast).

Specimens examined: 6 males, 30. X, 10:59 (banana wine).

This species is characterized by having a row of small black teeth inside the marginal teeth on male surstylus (cf. fig. 162 of Burla, 1954b; fig. 139 of Bock et Wheeler, 1972).

*fima* species group Burla

10. *Drosophila fima* Burla

*Drosophila fima* Burla, 1954b, *Rev. Suis. Zool.* 61: 165 (Ivory Coast); Burla, 1957. *Jh. Ver. Vaterl. Naturk. Wuttenberg* 112: 37 (West Africa); Tsacas et Lachaise, 1981. *Annls. Soc. ent. Fr.* (N. S.), 17: 395.

Specimens examined: 2 males, 30. X, 10:59–11:25 (banana wine).

This species is unique among the *fima* species group in having no sex combs of male fore leg (Tsacas et Lachaise, 1981).

Subgenus *Scaptodrosophila* Duda

11. *Drosophila* sp.

Specimens examined: 2 males, 30. X, 10:59–11:25 (banana wine).

Subgenus *Drosophila* Fallén

12. *Drosophila nasuta* Lamb

*Drosophila nasuta* Lamb, 1914. *Trans. Linn. Soc. Lond. Ser 2 (Zool.)* 16: 346.

Specimens examined: 2 males, 30. X, 10:59–11:25 (banana wine).

This species is widely distributed in Afrotropical Region, Sri Lanka and India (Kitagawa et al., 1982), recorded by Takada et Uehara, 1987, from Tanzania.

13. *Drosophila hydei* Sturtevant

*Drosophila hydei* Sturtevant, 1921. *Carnegie Inst. Pub.* 301: 101.

Specimens examined: 1 female, 1. XI, 15: 36 (lemon).

This is a cosmopolitan species.

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